



185254011b.ST25.txt  
SEQUENCE LISTING

<110> Kaumaya, Pravin T.  
Stevens, Vernon C.  
Triozi, Pierre L.

<120> Polypeptides and Polynucleotides for Enhancing Immune Reactivity to HER-2  
Proteins

<130> 18525/04011

<140> 09/632,036

<141> 2000-08-03

<150> 60/146,869

<151> 1999-08-03

<160> 46

<170> PatentIn version 3.1

<210> 1

<211> 19

<212> PRT

<213> Homo sapiens

<400> 1

Thr Gly Thr Asp Met Lys Leu Arg Leu Pro Ala Ser Pro Glu Thr His  
1 5 10 15

Leu Asp Met

<210> 2

<211> 22

<212> PRT

<213> Homo sapiens

<400> 2

Ala Val Leu Asp Asn Gly Asp Pro Leu Asn Asn Thr Thr Pro Val Thr  
1 5 10 15

Gly Ala Ser Pro Gly Gly  
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<210> 3

<211> 22

<212> PRT

<213> Homo sapiens

<400> 3

Leu Trp Lys Asp Ile Phe His Lys Asn Asn Gln Leu Ala Leu Thr Leu  
1 5 10 15

Ile Asp Thr Asn Arg Ser

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20

<210> 4  
 <211> 35  
 <212> PRT  
 <213> Homo sapiens

&lt;400&gt; 4

Thr Leu Ile Asp Thr Asn Arg Ser Arg Ala Cys His Pro Cys Ser Pro  
 1 5 10 15

Met Cys Lys Gly Ser Arg Cys Trp Gly Glu Ser Ser Glu Asp Cys Gln  
 20 25 30

Ser Leu Thr  
 35

<210> 5  
 <211> 21  
 <212> PRT  
 <213> Homo sapiens

&lt;400&gt; 5

Ala Leu Val Thr Tyr Asn Thr Asp Thr Phe Glu Ser Met Pro Asn Pro  
 1 5 10 15

Glu Gly Arg Tyr Thr  
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<210> 6  
 <211> 24  
 <212> PRT  
 <213> Homo sapiens

&lt;400&gt; 6

Pro Leu His Asn Gln Glu Val Thr Ala Glu Asp Gly Thr Gln Arg Ala  
 1 5 10 15

Glu Lys Cys Ser Lys Pro Cys Ala  
 20

<210> 7  
 <211> 18  
 <212> PRT  
 <213> Homo sapiens

&lt;400&gt; 7

Pro Glu Ser Phe Asp Gly Asp Pro Ala Ser Asn Thr Ala Pro Leu Gln  
 1 5 10 15

Pro Glu

<210> 8  
 <211> 20  
 <212> PRT  
 <213> Homo sapiens

&lt;400&gt; 8

Leu Tyr Ile Ser Ala Trp Pro Asp Ser Leu Pro Asp Leu Ser Val Phe  
 1 5 10 15

Gln Asn Leu Gln  
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<210> 9  
 <211> 19  
 <212> PRT  
 <213> Homo sapiens

&lt;400&gt; 9

Leu Phe Arg Asn Pro His Gln Ala Leu Leu His Thr Ala Asn Arg Pro  
 1 5 10 15

Glu Asp Glu

<210> 10  
 <211> 34  
 <212> PRT  
 <213> Homo sapiens

&lt;400&gt; 10

Cys Leu Pro Cys His Pro Glu Cys Gln Pro Gln Asn Gly Ser Val Thr  
 1 5 10 15

Cys Phe Gly Pro Glu Ala Asp Gln Cys Val Ala Cys Ala His Tyr Lys  
 20 25 30

Asp Pro

<210> 11  
 <211> 18  
 <212> PRT  
 <213> Homo sapiens

&lt;400&gt; 11

Lys Pro Asp Leu Ser Tyr Met Pro Ile Trp Lys Phe Pro Asp Glu Glu  
 1 5 10 15

Gly Ala

<210> 12  
 <211> 22  
 <212> PRT  
 <213> Homo sapiens

<400> 12

Ile Asn Gly Thr His Ser Cys Val Asp Leu Asp Asp Lys Gly Cys Pro  
 1 5 10 15

Ala Glu Gln Arg Ala Ser  
 20

<210> 13  
 <211> 19  
 <212> PRT  
 <213> Clostridium tetani

<400> 13

Asn Ser Val Asp Asp Ala Leu Ile Asn Ser Thr Ile Tyr Ser Tyr Phe  
 1 5 10 15

Pro Ser Val

<210> 14  
 <211> 17  
 <212> PRT  
 <213> Clostridium tetani

<400> 14

Pro Gly Ile Asn Gly Lys Ala Ile His Leu Val Asn Asn Gln Ser Ser  
 1 5 10 15

Glu

<210> 15  
 <211> 15  
 <212> PRT  
 <213> Clostridium tetani

<400> 15

Gln Tyr Ile Lys Ala Asn Ser Lys Phe Ile Gly Ile Thr Glu Leu  
 1 5 10 15

<210> 16  
 <211> 21

<212> PRT  
<213> Clostridium tetani

<400> 16

Phe Asn Asn Phe Thr Val Ser Phe Trp Leu Arg Val Pro Lys Val Ser  
1 5 10 15

Ala Ser His Leu Glu  
20

<210> 17  
<211> 15  
<212> PRT  
<213> Measles virus

<400> 17

Leu Ser Glu Ile Lys Gly Val Ile Val His Arg Leu Glu Gly Val  
1 5 10 15

<210> 18  
<211> 15  
<212> PRT  
<213> Hepatitis B virus

<400> 18

Phe Phe Leu Leu Thr Arg Ile Leu Thr Ile Pro Gln Ser Leu Asn  
1 5 10 15

<210> 19  
<211> 20  
<212> PRT  
<213> Plasmodium falciparum

<400> 19

Thr Cys Gly Val Gly Val Arg Val Arg Ser Arg Val Asn Ala Ala Asn  
1 5 10 15

Lys Lys Pro Glu  
20

<210> 20  
<211> 4  
<212> PRT  
<213> Artificial sequence

<220>  
<223> Linker peptide (artificial sequence)

<400> 20

Gly Pro Ser Leu  
1

<210> 21  
 <211> 9  
 <212> PRT  
 <213> Homo sapiens

<400> 21

Ile Leu Trp Lys Asp Ile Phe His Lys  
 1 5

<210> 22  
 <211> 9  
 <212> PRT  
 <213> Homo sapiens

<400> 22

Ile Leu Lys Glu Thr Glu Leu Arg Lys  
 1 5

<210> 23  
 <211> 9  
 <212> PRT  
 <213> Homo sapiens

<400> 23

Val Leu Arg Glu Asn Thr Ser Pro Lys  
 1 5

<210> 24  
 <211> 9  
 <212> PRT  
 <213> Homo sapiens

<400> 24

Ala Ala Arg Pro Ala Gly Ala Thr Leu  
 1 5

<210> 25  
 <211> 9  
 <212> PRT  
 <213> Homo sapiens

<400> 25

Leu Pro Ala Ser Pro Glu Thr His Leu  
 1 5

<210> 26  
 <211> 9  
 <212> PRT  
 <213> Homo sapiens

<400> 26

Leu Pro Thr His Asp Pro Ser Pro Leu  
1 5

<210> 27  
<211> 9  
<212> PRT  
<213> Homo sapiens

<400> 27

Cys Arg Trp Gly Leu Leu Leu Ala Leu  
1 5

<210> 28  
<211> 9  
<212> PRT  
<213> Homo sapiens

<400> 28

Arg Arg Phe Thr His Gln Ser Asp Val  
1 5

<210> 29  
<211> 9  
<212> PRT  
<213> Homo sapiens

<400> 29

Gly Arg Ile Leu His Asn Gly Ala Tyr  
1 5

<210> 30  
<211> 9  
<212> PRT  
<213> Homo sapiens

<400> 30

Thr Tyr Leu Pro Thr Asn Ala Ser Leu  
1 5

<210> 31  
<211> 9  
<212> PRT  
<213> Homo sapiens

<400> 31

Glu Tyr Val Asn Ala Arg His Cys Leu  
1 5

<210> 32  
<211> 9  
<212> PRT  
<213> Homo sapiens

&lt;400&gt; 32

Ala Tyr Ser Leu Thr Leu Gln Gly Leu  
1 5

&lt;210&gt; 33

&lt;211&gt; 9

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 33

Ala Leu Cys Arg Trp Gly Leu Leu Leu  
1 5

&lt;210&gt; 34

&lt;211&gt; 8

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 34

His Leu Tyr Gln Gly Cys Gln Val  
1 5

&lt;210&gt; 35

&lt;211&gt; 9

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 35

Gln Leu Arg Ser Leu Thr Glu Ile Leu  
1 5

&lt;210&gt; 36

&lt;211&gt; 9

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 36

Ile Leu His Asn Gly Ala Tyr Ser Leu  
1 5

&lt;210&gt; 37

&lt;211&gt; 9

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 37

Ile Leu Leu Val Val Val Leu Gly Val  
1 5

&lt;210&gt; 38



<211> 9  
 <212> PRT  
 <213> Homo sapiens

<400> 38

Asp Leu Thr Ser Thr Val Gln Leu Val  
 1 5

<210> 39  
 <211> 9  
 <212> PRT  
 <213> Homo sapiens

<400> 39

Val Leu Val Lys Ser Pro Asn His Val  
 1 5

<210> 40  
 <211> 9  
 <212> PRT  
 <213> Homo sapiens

<400> 40

Lys Ile Phe Gly Ser Leu Ala Phe Leu  
 1 5

<210> 41  
 <211> 9  
 <212> PRT  
 <213> Homo sapiens

<400> 41

Ile Ile Ser Ala Val Val Gly Ile Leu  
 1 5

<210> 42  
 <211> 20  
 <212> PRT  
 <213> Homo sapiens

<400> 42

Ile Asn Gly Thr His Ser Cys Val Asp Leu Asp Asp Lys Gly Cys Pro  
 1 5 10 15

Ala Glu Gln Arg  
 20

<210> 43  
 <211> 42  
 <212> PRT  
 <213> Artificial sequence

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<220>

<223> Amino acids: 1-19 are human HER-2; 20-23 are linker peptide; 24-42 are tetanus toxoid.

<400> 43

Thr Gly Thr Asp Met Lys Leu Arg Leu Pro Ala Ser Pro Glu Thr His  
1 5 10 15

Leu Asp Met Gly Pro Ser Leu Asn Ser Val Asp Asp Ala Leu Ile Asn  
20 25 30

Ser Thr Ile Tyr Ser Tyr Phe Pro Ser Val  
35 40

<210> 44

<211> 47

<212> PRT

<213> Artificial sequence

<220>

<223> Amino acids: 1-24 are human HER-2; 25-28 are linker peptide; 29-47 are tetanus toxoid.

<400> 44

Pro Leu His Asn Gln Glu Val Thr Ala Glu Asp Gly Thr Gln Arg Ala  
1 5 10 15

Glu Lys Cys Ser Lys Pro Cys Ala Gly Pro Ser Leu Asn Ser Val Asp  
20 25 30

Asp Ala Leu Ile Asn Ser Thr Ile Tyr Ser Tyr Phe Pro Ser Val  
35 40 45

<210> 45

<211> 42

<212> PRT

<213> Artificial sequence

<220>

<223> Amino acids: 1-19 are human HER-2; 20-23 are linker peptide; 24-42 are tetanus toxoid.

<400> 45

Leu Phe Arg Asn Pro His Gln Ala Leu Leu His Thr Ala Asn Arg Pro  
1 5 10 15

Glu Asp Glu Gly Pro Ser Leu Asn Ser Val Asp Asp Ala Leu Ile Asn  
20 25 30

Ser Thr Ile Tyr Ser Tyr Phe Pro Ser Val  
35 40

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<210> 46  
<211> 23  
<212> PRT  
<213> Homo sapiens

<400> 46

*E4*  
Ile Asn Gly Thr His Ser Cys Val Asp Leu Asp Asp Lys Gly Cys Pro  
1 5 10 15

*Conclude*  
Ala Glu Gln Arg Ala Ser Pro  
20